

RICK FOSTER - A SHORT NARRATIVE OF MY CAREER

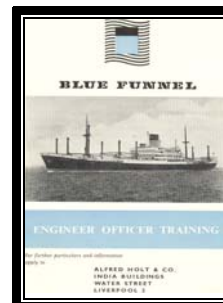
HMS Conway and the Blue Funnel Line 1960 - 1967

On returning from Uganda and at the tender age of 14, I was sent to HMS Conway Naval College. Two years there saw me mature from a pimply kid to a kid who was getting to be worldly wise. Appointment in the Royal Naval Reserve was a bonus?



HMS Conway

At Conway the intention was that I would carry on to be a Deck Officer but, after failing the colour eyesight test, was steered into an engineering career. So at the age of sixteen I became an Indentured Engineering Cadet with Blue Funnel, I was committed to four and a half years of training, made up of two years' full time at Technical College, two years at sea and a further six months back at College. At the end of this time I would emerge a qualified Junior Engineer.



Blue Funnel

The first two years at Riversdale Technical College in Liverpool were my introduction to adulthood. I was paid the princely sum of £3 2s 6d per week, about \$9.50. However we lived free in the Company Hostel opposite the College. \$9.50 was a lot of money in those days; you could have a good night out with a girlfriend for \$2.00 and a gallon (4 litres) of petrol or a packet of cigarettes cost only \$0.45.

Those years in Liverpool were the great days of The Beatles, Freddie and The Dreamers and a whole lot of Liverpool and Manchester bands.

I worked hard and gained a Diploma in Mechanical and Marine Engineering. Now I was handed my seagoing documents.

AT SEA 1964 - 1967

MV Denbighshire, August to November 1964, Engineer Cadet

Denbighshire was a Glen Line (part of Blue Funnel) 7,000-ton general cargo vessel built in 1939 (possibly Germany). Her claim to fame was one of the ships that ran the blockade of German warships and Italian aircraft to get supplies into Gibraltar.

From an Engineer's aspect, she was twin screw, with two seven cylinder two stroke, double acting, opposed piston engines. Although 25 years old, she could do 17 knots and was the equal to many more modern ships.



My first sight of her



At sea

This, my first voyage, took me out from Birkenhead, through the Mediterranean and the Suez Canal to Aden for bunkering. Thence to Penang and Port Swettenham (now Port Kelang) in Malaysia to Singapore for the first shore leave.

Having spent my childhood in Kenya and Uganda, it was a relief to back in the tropics and the balmy warm nights.

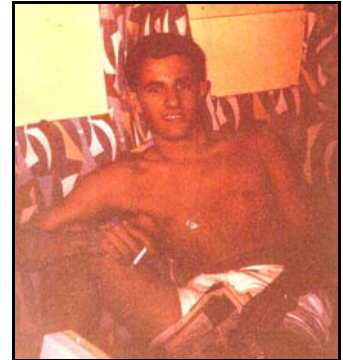
Work in a bloody hot engine room with temperatures in the high 40°C range was another thing altogether, but I soon acclimatised to the routine of work in those conditions.



In the warm tropics at last



Just come off watch



In my cabin

Out from Aden we rigged the swimming pool and had the compulsory lifeboat drill.



Another Cadet in the pool



Lifeboat drill



Singapore, ashore with the other engineers, I'm second from left

From Singapore up to Hong Kong, then to Yokohama, Shimizu, Nagoya and Kobe in Japan. This was the period just before the Tokyo Olympics. From Kobe to Pusan in South Korea, Shanghai in China and then back to the UK via Hong Kong, Manila, Jakarta, Singapore, Aden and the Mediterranean to end my first voyage.

Denbighshire was old and dirty and required constant attention to her engines, I cut my finger badly in Hong Kong on a piston ring (the pistons were 650mm in diameter), having to go ashore for stitches.

However she was great to be on and the other Engineers were good friends, I learnt a lot on this voyage.

MV Glenlyon, December 1964 to March 1965, Engineer Cadet

Glenlyon was a new ship with air conditioning and all mod cons. She was 12,000 tons, single screw and a Sulzer 9RD90 20,000 horsepower two-stroke turbocharged engine and was capable of 22 knots.



This time the voyage was Far East again to Colombo in Ceylon, Singapore, Hong Kong, Bangkok, Yokohama and returning via the same ports, with the exception that we docked in London after calling at Dunkirk and Rotterdam and Hamburg. My 21st birthday was in Rotterdam, the Engineers and others took me ashore and

Glenlyon was faster and more efficient than Denbighshire so consequently time in port was much shorter and less fun. Frankly I did not enjoy serving on her, too clinical and not demanding enough, I vowed not to return to her.

SS Hector, Three voyages, March 1965 to June 1966, Junior Engineer



SS Hector under the Sydney Harbour Bridge

Hector was built 1950, she was an 18 knot, single screw, 12 passenger, 10,000 ton general & refrigerated cargo vessel with two Foster Wheeler D type boilers producing steam at 550 psi and 500°F superheat. A Parsons triple expansion steam turbine produced 14,000 horsepower. Like all Glen and Blue Funnel Line ships she had British deck and engineering officers and Chinese crew.

Hector's regular run was from Birkenhead, through the Mediterranean and the Suez Canal to Aden for bunkering. Thence to Fremantle, Adelaide, Melbourne, Sydney and Brisbane. The return voyage was back through the same ports.

Australia still had a 6pm pub closing time then and also a minimum age of 21 for drinking, I was only 19. We occasionally called in for refrigerated apples from Launceston and Whale oil from Albany, where Australia still had a Whaling Station.

Back Ashore

In June 1966 I signed off the Hector and started the last six months of my Cadetship at Birkenhead Technical College. The course was designed to allow the Cadets to earn a six-month remission from seagoing qualifying time for their subsequent “tickets”.

In mid December 1966, after completing Tech College, I was sent up to Glasgow to assist in the commissioning of Glen Line’s brand new ship Glenfinlas, a sister ship to the Glenlyon. This was purgatory for me, as I hated this class of ship and the cold of Glasgow. Glenfinlas was at the fitting out basin of the John Brown Shipyard on Clydebank and a miserable Christmas was spent there.

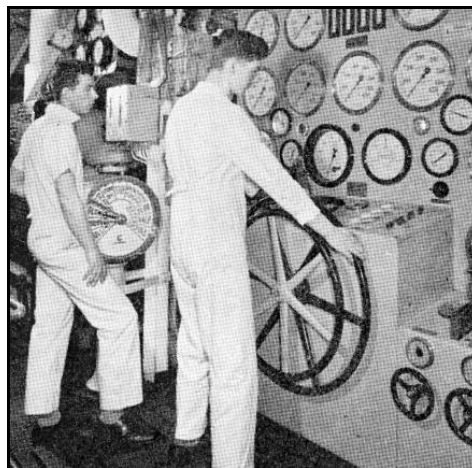
New Year’s Eve saw a group of us banged up in the Clydeside nick for “drunk and disorderly” and trying to launch the new Cunarder Queen Elizabeth II which was on the stocks alongside us! Time in the Company drawing office was the punishment.

SS Theseus, two voyages, February to August 1967, First Assistant Engineer

The first voyage was “Coasting”, the term used when a ship arrives back in the UK, the regular crew goes on leave and the Coasting crew takes over sailing around the UK coast unloading inbound cargo and loading outbound cargo ready for the next “Deep Sea” voyage when the regular crew took over again.



Theseus was built 1955; she was a 16-knot, single screw, 7,000-ton general & refrigerated cargo vessel with two Foster Wheeler D type boilers producing steam at 600 psi and 650°F superheat. A Metropolitan Vickers triple expansion steam turbine produced 8,000 horsepower.



The Manoeuvring platform where the turbines and boilers are controlled.

I remained on Theseus for the subsequent Deep Sea voyage to Australia again. She traded the same ports as Hector so I was well pleased.

My salary was now £1,200 per year, about \$70.00 per week. At sea, everything was duty free, a beer or a packet of cigarettes was one shilling (10 cents) and of course accommodation and meals were free.

Watch keeping at sea was the same as ever, 12 - 4, 4 - 8 or 8 - 12, seven days a week. With changeover time this meant that we did a 63-hour week. In port, however where the Deck Officers had to supervise the unloading and loading of cargo, all the Engineers had to do was keep power going, unless repairs were needed to be carried out.

Consequently the Engineers set up a cosy arrangement whereby at one out of every three ports one of us had the complete time off whilst the others did a 12 hour on 12 hour off watch. Being in port for a week at a time (unlike modern container ships and tankers where turn around is within two days), this meant time for one to get away from the ship and stay ashore whilst the other two did an 84-hour week.

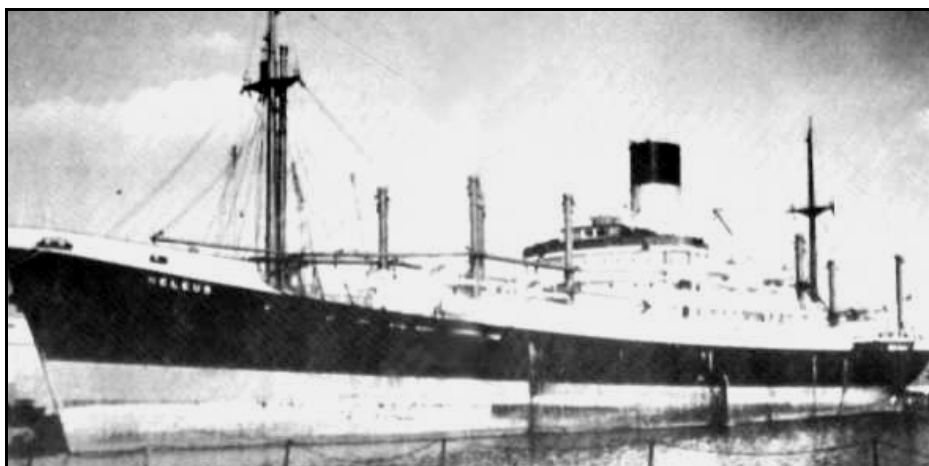
On my last voyage on the Theseus, in June 1967, we had left Aden and were northbound in the Red Sea heading for the Suez Canal and Piraeus, the port for Athens. At that time the Israeli - Egyptian six-day war started and the Canal was blocked. We had to turn around and circumnavigate Africa, calling at Mombassa, Cape Town, and Madeira and then back into the Mediterranean to Piraeus.

During this diversion the bar was slowly depleted and by Madeira had run out of beer and mixers, so Gin and water was the result!

This was a ten-day diversion. We were lucky that we were not one day ahead as other Blue Funnel ships were caught in the Canal, and stayed there for over a year.

SS Neleus, August 1967 to December 1967, First Assistant Engineer

Neleus was a sister ship to Theseus and on the same Australian run.



The voyage was uneventful and by then I had decided to leave Blue Funnel and emigrate to Australia. I had not really spent much time in England and had no "home town" with friends there. The many happy times in Australia and friends made, including two fiancés at once for a period of time convinced me to emigrate and make a new life there. In those days one needed a Sponsor and for £10, about \$30.00, a passage could be arranged.

My first year was spent settling down to a series of jobs in Sydney which included two voyages as an engineer on ships trading between Australia and New Guinea.

It was during that time I met Bev who was soon to become my wife.

Fire Control Pty. Limited, 1969 - 1977

Although I was employed to work on marine projects, Fire Control, at that time had two major other projects and it meant that all available staff were engaged on them.

Few people know that under the grassy slopes at the left side of the Sydney Cahill Expressway, where it comes down past Woolloomooloo Bay is a vast underground Navy strategic oil storage and pumping complex. We were contracted for the refurbishment of this depot.

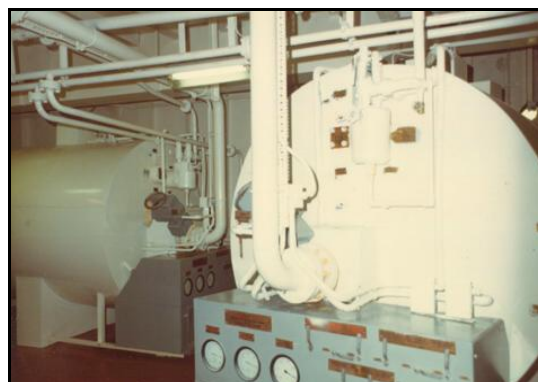
The other one was the Sydney Opera House. I spent three months on site detailing the manufacture of the fire and acoustic doors – some 1,000 in number. I recall complaining to one of the Architects, Peter Hall of Hall Todd and Littlemore, the firm that took over from Jorn Utzon, that every door was a different size! Later on when I was a Director of Eagle Consulting, Peter and I worked together on the building's refurbishment and we became firm friends.

Fire Control occupied a small office and factory in Chard Road, Brookvale, and the fire door manufacturing factory was in another building behind, and the first task every morning was to brush the asbestos dust off our desks and drawing boards!

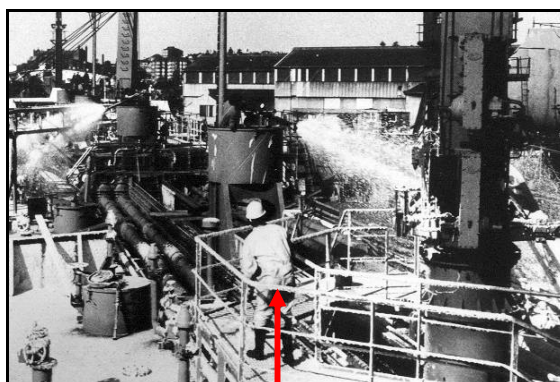
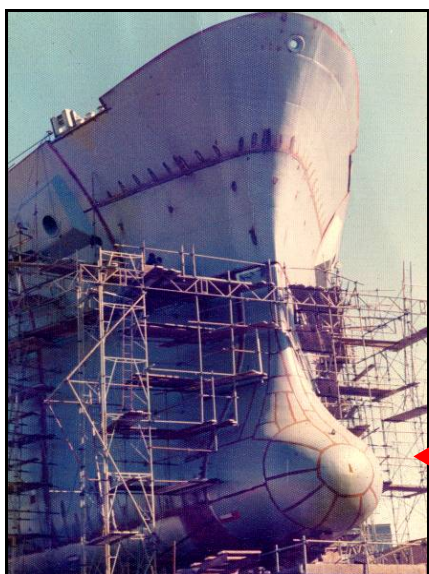
We provided all the fire fighting systems such as fire detection, sprinkler, CO₂ and foam systems, pumps, extinguishers as well as fire resistant doors and bulkheads (partitions) for the majority of Australian built ships from yards in Whyalla, Sydney, Newcastle and Brisbane.



Bass Trader – Evans Deakin, Brisbane



14 tonnes of fire extinguishing CO₂

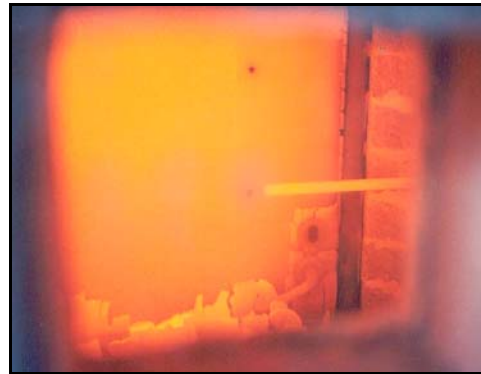


Here I am sampling foam from the system testing
This is the Howard Smith Tanker "Express". Built at the NSW State Dockyard in Newcastle, she was typical of my many projects.

Part of my tasks was to develop and test the fire resistant door and bulkhead systems. By 1978 Fire Control was the sole supplier of such equipment to the market.

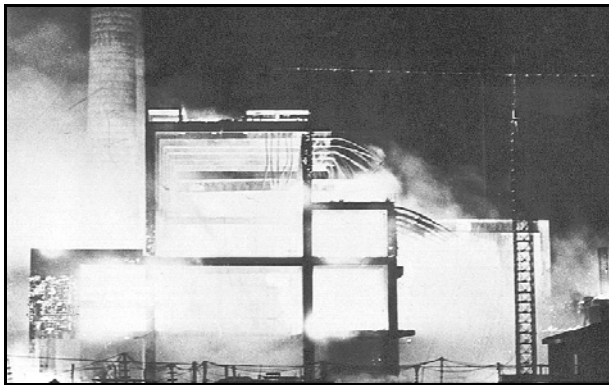


Fire doors and bulkheads



View inside fire test furnace

As well as marine work, I was involved in the design of fire protection systems for an Oil refinery in Singapore and Power Stations in NSW and Hong Kong. One interesting incident occurred during the construction of Ap Lee Chou Power station in Hong Kong, it burnt down during construction!



Ap Lee Chou – on fire



Wallerawang Power Station, Transformer protection

In 1971 Wormald bought out Fire Control and formed a Special projects Group, taking the most experienced staff from both Companies to support the new International division which went on to be the World leader in fire protection.

Early October 1977 Geoff Davis (then the Managing Director of Wormald) and another Director John Proudman invited me out to lunch and made me an offer I could not refuse. An appointment to our European (a choice of Germany, Denmark or England) organisation working in our offshore oil business. I naturally chose England and with six weeks to pack up, we departed on November 13th 1977.

Manchester 1977 - 1980

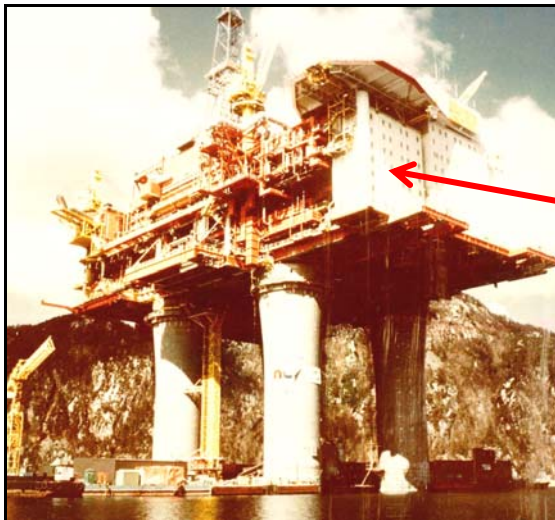
The initial step in Wormald's expansion overseas was the acquisition of the British fire protection company Mather and Platt. As an adjunct, Wormald had set up a small specialist team in Salford to carry out fire contracts for the emerging North Sea market and was completing the Mobil Statfjord A and Beryl A rigs when I was transferred there.

The oilrig industry was massive with larger rigs costing up to one billion US dollars. The rigs were fixed structures capable producing and storing oil for transfer ashore either by fixed pipeline or by tanker.

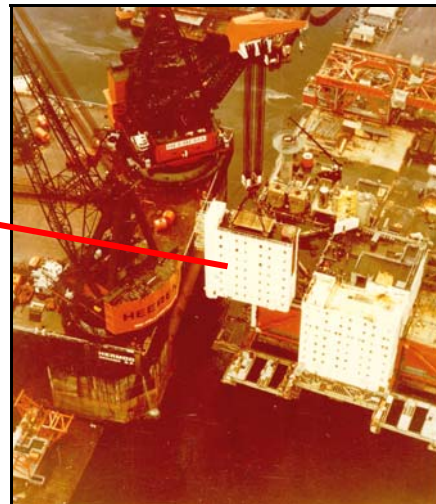


Beryl A 150 metres water depth Oil storage Statfjord A, B and C

My tasks were many and varied and to start with I led the team carrying out the initial design and bidding processes. Perhaps the most significant projects in which I was successful were the booking of the Mobil Statfjord B and Beryl B rigs, which after I left led on to Statfjord C. They were massive structures standing in up to 150 metres of water, weighing 800,000 tonnes and capable of drilling 40 wells. Overall height was taller than the World Trade Centre in New York.



Statfjord B in Stavanger Fjord before tow out



One of the 7-storey accommodation blocks being lifted aboard

Statfjord B was constructed in Stavanger in Norway and Wormald offices in Salford, Oslo, Odense (Denmark) and Hamburg were involved in the design and construction.

Wormald pioneered the concept of prefabrication the main system components in skid form, pre tested and ready to lift directly on to the rig. This has now become the industry norm.



Skid assembly



A foam skid

With most of our work being in Scandinavia I had travel frequently to our offices in Copenhagen, Odense and Oslo. In the first year I had 53 visits, more than one a week, later years slowed down to about one a month.

The Scandinavians are prolific drinkers and it was easy to get caught up with their long drinking sessions – much to my regret on the following days! On many occasions my colleague Ray and I were poured on to aircraft leaving either Oslo or Copenhagen after sessions of Aquavit (schnapps) with pint chasers and pickled herring.

Doing business with Scandinavian rig builders and American operators / clients at the same time was always difficult. Most of the Americans had no sense of humour, the Scandinavians were frequently pissed and we were either trying to book a contract or execute it.

Winter air travel in Northern Europe was also quite hazardous, many times flights were delayed or diverted and it was not unusual to have a runway overshoot in the snow at some airports.



Beryl A, completed



Statfjord B completed

As if those projects were not enough to occupy my time, I was asked by head office in Sydney to oversee two projects for the Royal Australian Navy. One was where the French Naval Shipbuilders – DTCN were to construct a new fleet replenishment vessel (later called HMAS Success). As part of the contract, the French Government was to place a certain percentage of the works with Australian companies.

Accordingly I spent many hours in the design and bidding process with many trips to the shipyard at Brest in France. DTCN were most unhelpful and even though the ship was for Australia, they insisted in all our documentation, drawings and tender to be in French – my schoolboy French was rapidly improved.

Ultimately DTCN defaulted on the contract and HMAS success was later built at Cockatoo dockyard in Sydney, funnily enough I was back in Sydney by then so she became my project.



HMAS Success undergoing trials of the Nuclear and Biological wash down system provided by Wormald.

The other Navy project was the construction of the first Patrol Boat – HMAS Fremantle at Brooke Marine in Lowestoft. She was the lead vessel for a further 14 sister ships that were constructed in Cairns by NQEA.



HMAS Fremantle after launching, note the snow on the deck.

One morning in November 1979 I had arrived at the office early when, at 7.15 am I received a phone call from the Wormald Managing Director in Sydney instructing me to get on a plane that day to Sydney, that afternoon I caught a plane to Paris and picked up a UTA flight to Sydney.

In Sydney I put in place the bid team for the new BHP / Woodside North-West shelf project and took a side trip up to Cairns to start off the follow-on Patrol Boat project. During 1980 I became a roving trouble-shooter for many of our companies' projects. Wormald had recently bought the American company ANSUL, and as they had no marine experience and had also just booked a project with the AMOCO Tanker company to refit all their 250,000 tonne super tankers with Halon fire systems, I had to visit the various ports where the works was being carried out and also spend time in Marinette Wisconsin at ANSUL's headquarters to report on their progress. I led Ansul on a hard learning curve because Americans had no concept of executing contracts abroad.

As well as AMOCO ships in Athens and Lisbon; the main place where the refits were taking place was Singapore. For the first project my inspection role soon turned into a hands-on exercise in order to ensure that the job was successfully completed in time. Typically Ansul had not set up any local supply lines and crazily had fabricated pipework in the USA and flown it to Singapore, they did not understand that places other than the USA could manufacture and fabricate pipe!

Here I joined up with colleagues from Sydney who had been bought in as supervisors.



AMOCO Europa in Singapore



Me, centre with Australian supervisors taking a break

Slough, 1980 - 1982

Although I still had some involvement in the North Sea operations, it was from this office that I finally booked the Beryl B project, my emphasis here was on projects in the middle east, notably Iraq and Syria.

During late 1980 and throughout most of 1981 I worked on the upgrade and refurbishment of Syria's oil production and storage facilities. The original installations had been carried out by the Russians, which the French later further screwed up.

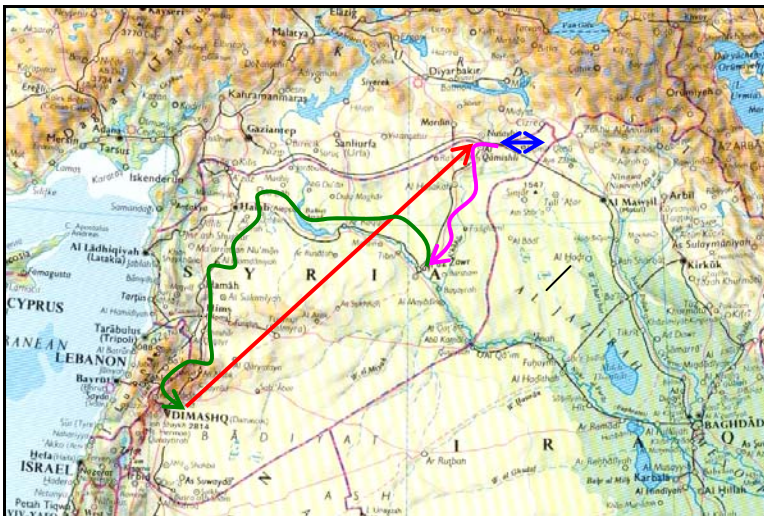
After a series of fires and explosions at their principal facility in North East Syria, on the border with Turkey and Iraq, Wormald were asked to put together a refurbishment programme.

My colleague Ken Stewart and I flew out to Damascus via Beirut. When we asked the British Airways crew why we were on a very old Boeing 707, the replied "Just in case it's hijacked or detained in Beirut", very reassuring.

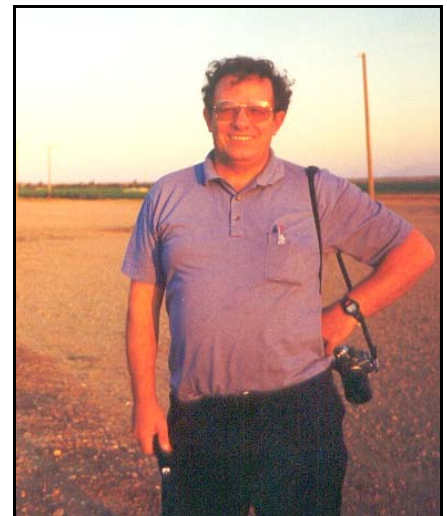
After meetings in Damascus with Government officials, Ken and I flew up to El Quamishly in an ancient French Caravelle – live chooks on the overhead luggage racks! Then out by road to Tel Adas to the oil facility to carry out the survey. Ken had over-indulged in unknown food the night before and was rather ill that day.

Travel in Syria was difficult to say the least with the figure below showing just **one** trip from Damascus to El Quamishly by air and to Tel Adas by car. The return "leg" was by bus to Dier-Ez-Zor then along the Euphrates River by bus via Aleppo and Homs!

Photography was almost forbidden except where necessary on the site and I managed to get a couple of shots with people in them.



Complex journeying



On the road again!

Journeys in Syria, — by air, — by bus, — by taxi, — by road

The Lebanon was in turmoil, the Iran Iraq war was still raging, and to make matters worse, Syria was supporting Iran, so travel in Syria, even with the Government's blessing was difficult. However even though Syria was (and is still) a totalitarian Islamic dictatorship, the people have much more freedom than in supposed "Westernised" Arab States like Saudi Arabia. Alcohol is discretely allowable and the women are permitted to wear western dress. I really liked the people and the country reminded me of Australia.

Living conditions were basic to say the least and I was very wary of what was in the only meat meals we had – goat stew. There were suspicious round objects looking up out of the pot at me.



Ken Stewart in background next to an oil tank that had caught fire – killing five workers



An ancient Russian fire engine

We completed our survey work within about ten days and prepared to set off back to Damascus. On enquiring about available flights we were politely informed that all scheduled flights within Syria had been cancelled for two weeks. It was the time of Haj (the pilgrimage to Mecca) and all planes were on the Mecca route!

Accordingly we started our return trip by road, first by an old bus down to Dier-Ez-Zor, then in a “taxi” (a 1940’s Mercedes Benz) shared with three travelling Arabs with a crate of chooks on the roof, along the Euphrates river to Aleppo, made famous by T S Lawrence (of Arabia) and many of the fine old hotels are still there, though somewhat dilapidated. Overnight in Aleppo then down to Damascus via Homs in another taxi.



The Euphrates River at Dier-Ez-Zor



Elegant Aleppo

During our return road journey we were constantly stopped at Army roadblocks with a tank dug in each side of the road. Winding the window down one became used to the barrel an AK47 casually resting a few inches from your ear. “Russe? Allemagne?” was always the aggressive question, Russian or German? When “Australian” was the answer the mood changed. Invariably the only English speaker was called over – “*He wants to know if you know his cousin Abdul in Melbourne*” – Everybody in the world has a relative in Australia!

Back in Damascus we reported in to the Government Oil Company on progress and unknown to the former, the Australian Consulate (for a welcome can of cold Fosters and military style debriefing) and back to the Sheraton Hotel, a complete contrast to what we had been through.

Back in England my time there was to be terminated as sufficient expertise had by then been passed on to our UK employees.

Sydney, Wormald Fire Systems 1982 - 1987

I first touched base with old friends at the Navy and was able to book the fire systems on HMAS Success, the aborted project from my UK days. She was now being built at Cockatoo Dockyard in Sydney.



Me, testing a foam system nozzle on Success



HMAS Success after commissioning

After HMAS Success, I contacted an old friend at Boral Gas, which was planning a new storage and tanker loading facility at Port Botany. Without having to compete at tender, Wormald was awarded the fire protection contract, which I then went on to design and supervise.

At the same complex, the Maritime Services Board (MSB) was planning a new ship loading facility for hazardous chemicals and gas. This was to be a turnkey project that included all the civil, structural, mechanical and fire works. Although this project went out to tender Wormald booked the project and again I administered the project.



The Boral Loading Bay



The MSB Project



The MSB project team, me centre rear



Celebrating the completion of the MSB project



The opening on TV, me



The Transport Minister playing with the system controls, my bearded face just visible

Each of these projects took about a year to find, book and complete but it was well worth the effort and each was valued in the millions of dollars.

My next target was the Mascot QANTAS Jet Base where they were planning a new hangar for the recently acquired Boeing 767's. Not only did I secure that project but also the refurbishment of the systems in the two older 747 hangars and an even older hangar, which housed the two RAAF Boeing 707's that the Prime Minister used.



A 747 outside the new 767 hangar



Fire equipment in the new hangar

One factor of Wormald's operation still frustrated me though. We were the major fire company in the World and yet in our home base of Australia none of our sales staff had even used a fire extinguisher, let alone operated a major system.

As I had undergone fire-fighting training whilst at sea and later an advanced course at our Ansul fire training facility in Marinette USA, I was asked to set up a course for the Sydney staff. This was great fun; I suppose that inside every fire protection engineer is an arsonist waiting to get out!



Me, demonstrating an extinguisher



Now a more difficult fire



Me, watching students training



Me, supervising the students

International Fire and Security Consultants (IFSEC), 1987 – 1989

One thing in common that all of my major projects had at Wormald was that initially the client would come to us for advice and then appoint and pay Consultants to draw up the specifications. Then, those Consultants would come to me and seek help in doing the job that they had been paid for.

I discretely approached these major clients and offered them the consulting service direct, however they could not be seen to be dealing directly with a contractor.

Accordingly, in 1987 Wormald set up a new company called International Fire and Security Consultants, with offices at Birkenhead Point in Sydney.

As the Manager, I seconded some six staff from within our fire and security divisions and set about seeking consulting and design work.



We soon established ourselves as one of the premier fire and security Consultants and were one of only three ASIO approved Defence Security Consultants in Australia.

At that time Wormald International was the major (40%) shareholder in the newly formed Australian Submarine Corporation (ASC), so naturally IFSEC were appointed as design consultants for the Adelaide construction facility.



The ASC Adelaide facility



The ASC Hull and fit-out building

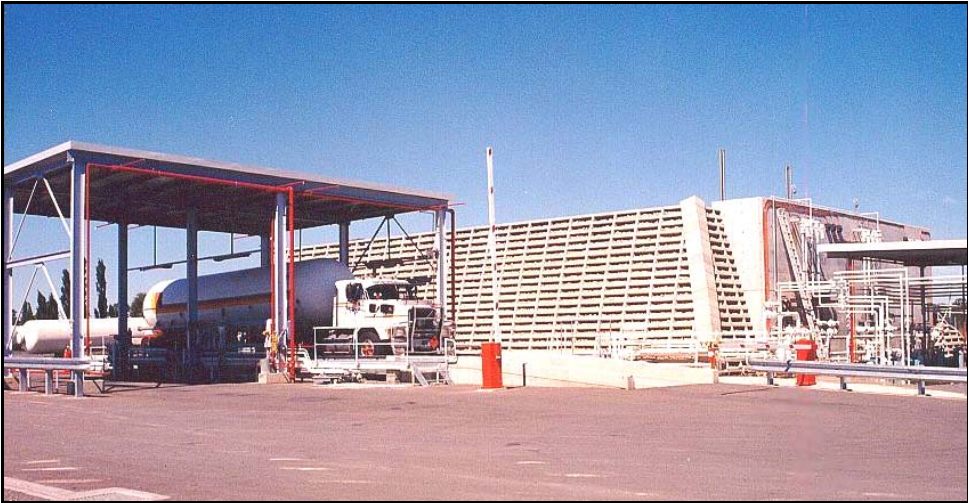
Because of the amount of work that we had to do for ASC, we had few other contracts except for putting in place maintenance procedures for the QANTAS Jet base, some work for Laminex at Wagga Wagga and the new ELGAS facility at Blacktown.



Flying to Wagga with Rob Marshall who had a pilot's licence



Landing at Bankstown airport



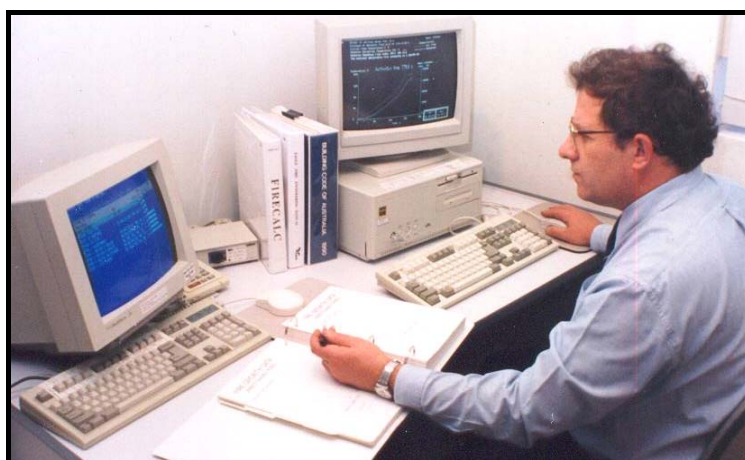
ELGAS distribution at Blacktown

Eagle Consulting Group, 1990 – 1995

Geoff Davis, my old boss from Fire Control days, and later Managing Director of Wormald, had recently been “retired” out of Wormald during one of its many ownership shuffles in the late 1980’s. He, I and other old Fire Control staff regularly met at the Manly Warringah Leagues Club for drinks and a Chinese meal.

After leaving Wormald, Geoff had started Eagle Technologies, providing three streams of business, management consulting, lawn and garden care and pest control. This was because of the “non-compete” agreement he had with Wormald. I may have seemed an odd mix but it worked well. One evening he suggested that I join him and start a Building Code and Fire consultancy, so in February 1990 that just what we did.

In the next six years Eagle Consulting developed into the strongest and most innovative Fire Consultancy in New South Wales, and possibly Australia. Building Codes were being revised to reflect performance rather than prescriptive requirements and we took full advantage of these changes and the new software that allowed fire engineers and building designers to predict the development and spread of fire. (See the “Engineers Australia” article on the web site).



Me carrying out engineering calculations

As well as employing a diverse team of staff, mainly ex Wormald people, I stepped up my qualification base and gained accreditation from NSW WorkCover as a Dangerous Goods Consultant (see later Boral project details), became a NSW Licenced Security Consultant and was appointed as Fire Advisor to the Heritage Council of NSW.

But I have jumped forward too quickly, so, how did I get all this underway?

Well, in late 1989, Barry Eadie a senior officer of the NSW Fire Brigade (NSWFB), whom I had many dealings with on the major industrial projects in the past, asked for my input into the fire safety design of the then planned Sydney Harbour Tunnel. Using my home computer, I carried out some calculations on expected fire scenarios and gave him some broad answers.

This small investment in my time paid off when; within two weeks of the start of Eagle he recommended that the NSW Roads and Traffic Authority (RTA) employ me to review their Consultants preliminary fire systems designs. This I did and as my previous experience with Consultants had proved, they had not only made some basic design errors but had specified a very expensive, cumbersome and potentially unworkable system.

My report to the RTA, which indicated that I could save in excess of 35% of the estimated cost and provide a better system, was well received and I was commissioned to complete a new design.



Barry Eadie in the Kings Cross tunnel during detector testing for false alarms.



Picture 2. Performance testing of deluge valve assembly at Wormald Fire Systems, Ashfield NSW. From left to right: Peter Setright, Bill Fleming - Transfield Kumagai, Berndan White - Roads and Traffic Authority and Rick Foster - Eagle Consulting Group.

Deluge valve testing at Wormald

Part of my research was to investigate equipment performance and immunity to false alarms, and with the RTA and NSWFB, we closed off part of the Kings Cross tunnel to test fire detector response characteristics, we later tested the performance of the selected water control valves.

After the design works were completed and Transfield Kumagai (the tunnel builders) had awarded the fire installation contract to Wormald. Transfield asked Eagle to carry out the detailed design of all the fire mains and, as they jokingly remarked, “as you guys are putting all the water in, you can design the drainage systems to remove it”. By this time I had engaged staff to carry out the detailed design work.

The innovative design of the project was a complete success and has been used as the standard for safety systems in all new NSW tunnels since.

This is the deluge system being tested. It is part of a combined fire detection and suppression systems which interface with the smoke extract and traffic monitoring systems.



As demonstrated by the tunnel project, it’s amazing how contacts from the past pop up at the most opportune times. Soon after booking the tunnel project I received a call from the facilities Manager at the Sydney Opera House. My old architect mate, Peter Hall, from the original construction days had recommended me for the refurbishment project.

So started the investigation and documentation for the replacement and upgrading of the existing fire safety systems. What the public sees of the Opera house is but a small part of the building. There are several basement levels containing mechanical equipment and storage, the back stage, office and administration areas and above the main concert hall and opera hall auditoria are vast open spaces between the ceilings and the roof “sails”. Over several months I, and my team, got to know the interior of the Opera House intimately.

During my time at Eagle I accepted a part time position at the University of Technology – Sydney, lecturing students in Building Code and Fire Safety. This was mostly in the evenings and interestingly; most of the students were Health and Building Inspectors from various Sydney Councils sitting for their Associate Diploma.

More interesting was that I would invariably meet the same guys during the day in the course of negotiating with them the various Fire Safety Orders that they had placed on older buildings, needless to say my influence on them assisted me in my work.

One fascinating project was when we were engaged by Boral Gas (another old client!) to investigate why their safety systems had been ineffective after a fire and explosion in April (April 1st!) 1990. A newspaper report of the incident appears below.

GAS PLANT BLAST 'STILL A MYSTERY'

POLICE yesterday told a coronial inquiry the explosion of a gas storage tanker which forced the evacuation of thousands of inner-city residents still was a mystery.

Detective Sergeant Paul Doran, head of a 10-man police investigation team, told Glebe Coroner's Court there was no explanation for the explosion at the Boral Gas plant at St Peters on April 1 last year.

He said police had evidence that someone had been on the Boral site shortly before or at the time of the fire – but that person has never been found.

By DANIELLA ONGARO

A truck was found parked on the side of the canal with its engine running and the driver's door open, said Det Sgt Doran.

A witness photographed an unknown person in a wooden boat in the canal, rowing away from the fire about 75 minutes after the blast, but the person and boat have not been found.

A former fitter at Boral, Ian Hunt, admitted that when told about the explosion he returned to a site office and "doodled" on a notepad: "Goodbye, gas plant, goodbye."

"The reason I wrote those words was because I was reflecting back on the amount of work we had put into the place and I had seen it gone," Mr Hunt told the inquiry.

He conceded the note sounded "threatening" but police have accepted his explanation.

About 9pm on April 1 last year, a 100 tonne gas storage tanker at the plant exploded and was torpedoed 160m into the Alexandria canal.

The blast triggered a series of explosions which sent flames kilometres into the sky and forced the evacuation of thousands of residents.

No one was injured.

Det Sgt Doran told the court he believed that the MSS security guard who was supposed to visit the Boral site had failed to do so – and then "bodgied up" his worksheet records after the explosion.

On the day of the fire the contract for Boral's security operations had been transferred from the Wormald company to MSS.

It was not our remit to determine the cause but in our technical investigation we found that the installed safety systems had not been designed nor installed properly. In the ensuing investigation by the NSW Coroner and prosecution by the NSW Department of Industrial Relations (later to be called WorkCover), I successfully supported Boral's contention that as the Department had inspected and licensed the facility, Boral was entitled to assume that the systems complied. Later changes to WorkCover removed its inspection role for Dangerous Goods facilities, leaving the owner to engage accredited consultants to inspect and warrant conformity. It was after this case that I was appointed as such a consultant.



The destroyed Boral facility

The number projects and clients serviced are too numerous to document here but generally we provided services in many different areas.

- Building code compliance reports of existing buildings for owners or prospective purchasers carrying out “due diligence” investigation. Included in these was the AUSSAT satellite facility at Belrose and all the University of Technology buildings in Sydney.



AUSSAT



UTS at Haymarket

- Building code design for developers and builders. We were able to assist the Architects and builders to achieve major cost savings in construction costs. We were engaged for two notable buildings, the Sydney Morning Herald where our design advice resulted in some \$30 million in savings over conventional Code compliance and the new Arnott’s factory.

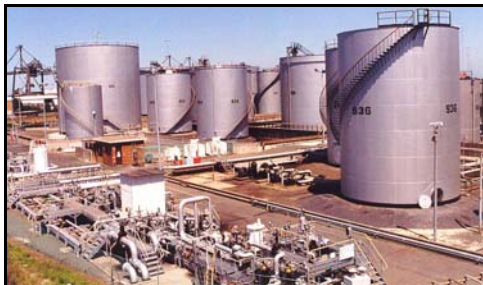


The Fairfax / Sydney Morning Herald facility



Arnott’s new factory

- Dangerous Goods Certification where we would survey and report on any measures required to make the facility comply with the Regulations. Included here were clients typical of Caltex and Mobil.



Caltex Banksmeadow



Mobil Botany

- Fire and Security systems where we would carry out either the detail design or prepare specifications. Typical of these would be the Liddell power station extensions and the AMCOR aerosol filling plant at Taree.



Liddell Power Station



AMCOR plant – me checking system

- Advice and design services for older and Heritage listed buildings, which, by their nature, could not comply with modern building codes. This aspect of my work was very satisfying and came about through my Heritage Council association. Significant buildings that I worked on included Balmain Hospital, St. Vincent's Hospital Lismore, Dame Edith Walker Hospital at Concord and the Royal Sydney Yacht Squadron.



St. Vincent's Lismore



Royal Sydney Yacht Squadron



Dame Edith Walker Hospital



The Queen's Club



Inside the Club

The Queen's Club in Sydney, opposite David Jones', was a particularly interesting project. The Club was a ladies only club dating back to the late 1800's and provided accommodation for country ladies visiting 'Town'. Sydney City Council had served a 'Fire Safety Order' which placed such onerous constraints on the Club that it was in danger of closing.

Working with the Architect we designed sympathetic and cost effective alterations that met all safety requirements. I became quite popular with the management and lady members that if I walked in today I would be made welcome.

- Court work as an Expert Witness. One particularly interesting case was where Woollahra Council was attempting to enforce undue constraints on the operators of Peppers Hotel at Double Bay. Through our work and after lengthy litigation the case was resolved in our favour.



Peppers, Double Bay



Inside the Hotel

There were many more clients and projects which meant that over time, the practice expanded with me taking a more supervisory role and only becoming deeply involved in the specialist projects and Court Cases.

One day in late 1993 I received a telephone call from Jonathan Munro-Ford, an Australian who had worked in Slough, England, whilst I was in Manchester. Jonathan had some contacts in the Middle East and had heard that the Syrian petroleum Company project (in which I had been involved in 1980) was to be resurrected. He convinced Geoff Davis and me that Eagle should become involved.

Accordingly I spent quite some time in 1994 and 1995 flitting over to England, Syria and the Lebanon in an attempt to place Eagle in the project. This meant further trips up to Tel Adas in northern Syria for survey work and numerous meetings in Damascus and Beirut.



Jonathan and me at the Tel Adas guest house



Rather less salubrious inside

We had good local representation in Damascus with seemingly all the right contacts in Government and the ruling house of President Assad.



On the road back to Damascus



Checking out a local service station

Back in Damascus we had the usual debriefing with the client and the Australian Consulate and had a couple of days to wait before returning to Australia via Frankfurt and London.



Back to the Souk



And a Turkish coffee – see the guy with the Hubble Bubble behind me!

Finally we completed our work and put in a bid for some US\$35 million for the works, and waited and waited and waited – in vain! In the meantime I also looked at opportunities in Dubai, Abu Dhabi and Europe.

Eagle Fire and Security – 1995 - 1996

I always knew that the business side was going to be difficult and the subsequent loss of the Damascus venture was very disappointing. However, ever the optimists, Jonathan and I pursued whatever work we could get.

These were invariably projects in parts of the world that others were avoiding, like Nigeria, Syria, Jordan and Lebanon.

We booked two major projects, firstly a Fire Protection system at the Shell Ughelli facility in Nigeria and then a major system expansion to the Jordanian Aqaba Refinery. This was worth over US\$500,000 and the contract was with a Romanian Company – Industrial-Export who were very difficult to do business with and many trips to Bucharest were needed to finalise the project.



Typical “welcome” at the Bucharest Airport Taxi Rank!



Final negotiations with Industrial-Export

After finalising our contract with Industrial-Export, Jonathan I were due to fly back to London. However a blizzard had swept through Romania and at the airport, the Lufthansa and British Airways crews had refused to leave. However we were booked on Tarom – what was once son of Aeroflot and these guys said that they would fly anytime.

Needless to say two takeoffs were aborted and after much more de-icing and following two snowploughs down the taxiway, we were away. I can honestly say that with all the flying that I have done, this is the first time that I was really scared.



Waiting for the flight



Boarding via open stairs in the blizzard

Next to Jordan for the final survey work and the difficulties in dealing with Arabs who only spoke French, Romanians who only spoke German and me who thought that they were all a bunch of idiots. However persistence won through which allowed me to return to start the design and procurement process.



Me, surveying in Jordan



Inspection of equipment made by our contractors



One of 8 containers of equipment at Southampton docks, bound for Aqaba.

For the Shell project, Jonathan and I had to meet some Russians in Belgium to arrange for suitable site labour. We could hire qualified Russian tradesmen for US\$75 per day (half the British rate) from defunct Russian Naval shipyards to fulfil our needs.

The meeting was held clandestinely in a restaurant at Waterloo just outside Brussels (the Battle of Waterloo place), as official dealings in Europe with the Russians were frowned upon.



On the EuroStar to Brussels



Meeting with the Russians, them at left and us at right, how odd that it worked out that way!

I completed both the Aqaba and Shell Nigeria projects successfully. By this time I was becoming increasingly frustrated with the financial side of the business and decided to terminate the relationship and return home to Australia.

Wormald Technology, 1996 – 2002

Wormald Technology, part of the US Tyco group, was a specialist Military Contractor with projects building flight simulators, control systems for submarines and fire protection for naval and commercial ships. I was to be responsible for this fire protection business and in the four years that I was there built up the business to a point where we had contracts for either new systems or refurbishment for almost the entire Royal Australian Navy fleet.

At one stage I had projects covering 49 ships on my books, including:

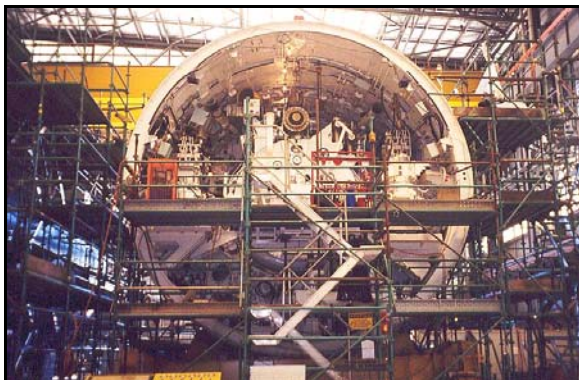
- Six new Collins Class submarines.
- Six new Huon Class Minehunters.
- Eight new ANZAC frigates.
- Two new Hydrographic Survey Ships.
- Two new Minehunters for the Royal Thai Navy.
- Refurbishment of the fifteen Fremantle Class Patrol Boats that I had done the original installation on in the 1970's.
- Refurbishment of the six Adelaide Class Frigates.
- Refurbishment of HMAS Westralia.
- Refurbishment of the two Bay Class Minehunters.
- Refurbishment of the 'Griffin Venture', a BHP Petroleum floating oil production vessel.



A Minehunter at sea



The two Hydrographic ships at sea



A Collins Class submarine hull under construction



A fire system in a Collins Class submarine

I travelled extensively throughout Australia for this job with occasional visits to England, New Zealand, Singapore and Malaysia.

On highlight was a visit by “Red” Adair to our Sydney offices, interesting conversations regarding my job in fire prevention and his in fire suppression – I think I’ll stick to mine!



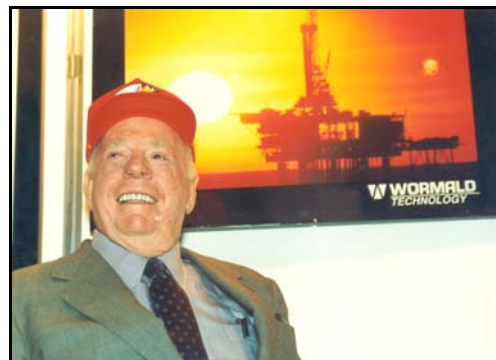
An Adelaide Class frigate



A Fremantle Class Patrol Boat



HMAS ANZAC at sea



‘Red’ Adair at Wormald Technology

I believe that I brought a new standard of professionalism into Wormald Technology’s marine fire business, and in recognition of the substantial contributions that I made to the business; I was awarded frequent salary rises and performance bonuses.

Perhaps the most interesting part of my work here had nothing to do with the marine business. In 1998 I was asked to carry out a “Peer Review” of the fire and safety systems design for the new Sydney Olympic Stadium. This was in recognition of my previous experience in Building Code and Fire design that I established at Eagle.

My review led to some significant changes to improve the design and safety features and I like to think that I made some small contribution to the success of the event.

In 1999 Tyco sold off all the non-fire parts of Wormald Technology’s business to Thomson-CSF of France and I was left, as Operations Manager, to manage the fire business. This I did successfully to a point where all the Navy work had been completed to a point where someone else could take over. At this point I discussed my future with my Senior Manager. I had decided to resign and move to Noosa and offered my services as an outside Consultant. My resignation was not accepted and as I was not prepared to enter a “non-compete” arrangement, Tyco asked that I remain as a full time employee, working from my home in Noosa as their National Marine Coordinator.

This was a nice arrangement and I supported the various States’ efforts in their marine business.

Early in 2002, a junior Tyco administrator and Harvard Business School graduate decided to make me redundant commenting that I had nothing left to offer the Company! I took their money and ran.

Fire and Security Consulting Services (FSCS), 2002 - 2014

During this period I returned to Fire Engineering activities first commenced at Eagle Consulting Group.

Queensland was experiencing a modest building boom and many Clients and Architects were looking for value and versatility in their building designs.

Consequently many projects required Alternative Solutions under the Fire Engineering process which I had been involved in the development (see “Engineers Australia article)

Whilst the timeline above indicates activities up to 2014, I formally retired in 2011. In October 2011 I had a heart attack resulting in a quad by-pass graft and ensuing long term neural pain issues. Although this has accelerated my retirement, I continue to hold an interest in the fire and building industry. However the phone keeps ringing and I provide advice and write technical papers to keep my mind active.

I keep my RPEQ registration current so I am able to Peer Review reports by others.

One of the activities that I enjoy is preparing and publishing technical papers on Fire Engineering, Building Codes and Fire Protection. Many of these are accessible through this site and I hope readers will find them interesting.

Whilst not comprehensive, the following are representative of the projects in Residential, Commercial, Marine and Industrial developments executed in this period. Some of the projects also included Project Management and detailed design services.



**As principal consultant (projects in *italics* as a sub-consultant):-
*Aged Care & Institutional***



- Adventist Aged Care, Caloundra dementia and health care centre.
- *Amarina Aged Care – Coolum Beach and Windsor*
- Anglican Aged Care (Spiritus): Abri at Southport, Autumn Lodge at Greenslopes, Kirami at Hervey Bay and St Martins at Taigum
- Padman Aged Care facility – Nambour
- St Patrick’s College - Gympie

Manufacturing & Warehousing



- *Austchilli Packaging and Warehouse facility – Bundaberg*
- Bundaberg Brewed Drinks – Bundaberg
- Bundaberg Cold Stores
- *“Crest Electronics” warehouse – Brendale* CSR Bradford Insulation – manufacturing and warehousing facility – Brendale
- Diageo blending, bottling and warehousing facility – Sydney
- Dulux Rocklea, coatings manufacture and warehousing – upgrade of fire services
- *G James Glass / aluminium fabrication facilities in Campbellfield and Brisbane.*
- Gayndah Packers – Gayndah, Fruit packing facility.
- Morton Bay Regional Council warehouse - Brendale
- National Foods – Crestmead
- Nestle - Gympie
- *P & O Cold Logistics cold store facility, Murarrie Queensland.*
- *“Power Games” electronics distribution warehouse – Gaven*
- *Primo Smallgoods - Wacol*
- *Smiths Snackfoods (PepsiCo) – Tingalpa*
- SP Exports – fruit packing facility - Childers

Retail & Wholesale



- Bay Village shopping centre – Noosa.
- Coles Nambour
- Noosa Junction Plaza – Noosa
- Square on King shopping centre – Buderim.
- Royal Hotel – Gympie.
- Westpoint” Shopping Centre (Woolworths) – Beenleigh.
- Young Australian Hotel – Bundaberg

Miscellaneous



- Bundaberg Masonic Lodge
- Buderim Ginger – Theme ride building.
- *Hillcrest Christian College – Performing Arts Complex*
- *Kogan Creek Power Station.*
- Sunshine Coast Stadium (Quad Park) Kawana Waters
- Lane Cove tunnel, Sydney – Peer review of design documentation.
- Lyttleton tunnel, Christchurch, NZ – Peer review of design documentation.
- Mackay Exhibition Hall

Marine, Mining & Industrial

- Ansul USA (Tyco International) Site survey of marine facilities at PT Freeport Indonesia, Developed technical options and pricing for the protection of coal and ore barges.
- *BMA Heavy Vehicle Workshop – Moranbah*
- *Boyne Smelters – Carbon Bake Furnace #4*
- EDI Downer – New railcar facility – Maryborough.
- *Jacobs - Dugald River Expansion - MMG - Townsville Loadout Facility Shed*
- Sun Metals - mineral concentrate storage warehouse – Townsville.

Commercial & Residential



- Fairshore Apartments - Noosa
- Multistorey office complex – Woolloongabba.
- *Nambour Plaza Shopping Centre*
- Noosa Harbour Marina.
- “Ocean Views Resort” multi storey apartments and retail complex – Caloundra.
- “Ocean View” - multi storey apartments – Rainbow Beach.
- “Pier One Apartments” multistorey apartments – Hervey Bay
- “Regatta Corporate Centre” multi storey offices - Kawana.
- “Sandpiper” Apartments Hastings St. Noosa
- Settlers Cove “Elandra”, “Iluka” and “Emerald”, multi storey apartments – Noosa.